Table S1 Microprobe analyses data

	point number	Weight%							Formula normalized to 8 oxygen							
		SiO2	Al2O3	FeO	CaO	Na2O	K2O	Total	Si	Al	Fe	Ca	Na	K	Total	Composition
Dul-15-8B	1	54.740	28.238	0.309	11.057	5.120	0.381	99.846	2.478	1.507	0.012	0.536	0.449	0.022	13.004	$An_{53.2}Ab_{44.6}Or_{2.2}$
	2	54.159	28.948	0.407	11.568	4.989	0.339	100.410	2.444	1.540	0.015	0.559	0.436	0.019	13.014	$An_{55.1}Ab_{43.0}Or_{1.9}$
	3	53.540	28.606	0.366	11.818	4.796	0.365	99.491	2.441	1.537	0.014	0.577	0.424	0.021	13.014	$An_{56.5}Ab_{41.5}Or_{2.1}$
	4	54.369	28.210	0.450	11.365	5.134	0.386	99.913	2.466	1.508	0.017	0.552	0.451	0.022	13.017	$An_{53.8}Ab_{44.0}Or_{2.2}$
	5	53.900	28.197	0.506	10.864	5.255	0.362	99.084	2.463	1.519	0.019	0.532	0.466	0.021	13.020	$An_{52.2}Ab_{45.7}Or_{2.1}$
	6	53.346	29.040	0.524	11.925	4.870	0.320	100.025	2.422	1.554	0.020	0.580	0.429	0.019	13.024	$An_{56.5}Ab_{41.7}Or_{1.8}$
	7	56.037	27.961	0.378	10.659	5.460	0.343	100.838	2.508	1.475	0.014	0.511	0.474	0.020	13.001	$An_{50.9}Ab_{47.2}Or_{2.0}$
	8	54.175	29.021	0.393	11.790	4.845	0.352	100.576	2.441	1.541	0.015	0.569	0.423	0.020	13.010	$An_{56.2}Ab_{41.8}Or_{2.0}$
	9	54.086	28.509	0.375	11.725	4.924	0.334	99.952	2.452	1.524	0.014	0.570	0.433	0.019	13.012	$An_{55.7}Ab_{42.4}Or_{1.9}$
	10	55.208	28.243	0.378	10.860	5.370	0.289	100.348	2.486	1.499	0.014	0.524	0.469	0.017	13.008	$An_{51.9}Ab_{46.4}Or_{1.6}$
	11	55.400	27.265	0.532	10.293	5.364	0.475	99.330	2.519	1.461	0.020	0.501	0.473	0.028	13.001	$An_{50.1}Ab_{47.2}Or_{2.7}$
	12	54.190	28.967	0.411	11.947	4.779	0.383	100.678	2.441	1.538	0.015	0.577	0.417	0.022	13.010	$An_{56.8}Ab_{41.1}Or_{2.2}$
SK90-12	1	55.635	27.971	0.333	10.449	5.581	0.418	100.387	2.502	1.483	0.013	0.504	0.487	0.024	13.012	$An_{49.7}Ab_{48.0}Or_{2.4}$
	2	56.163	27.669	0.411	10.183	5.753	0.391	100.569	2.520	1.463	0.015	0.489	0.500	0.022	13.010	$An_{48.4}Ab_{49.4}Or_{2.2}$
	3	54.143	28.200	0.369	10.621	5.316	0.377	99.027	2.472	1.517	0.014	0.520	0.471	0.022	13.016	$An_{51.3}Ab_{46.5}Or_{2.2}$
	4	55.730	27.650	0.307	10.435	5.495	0.401	100.017	2.514	1.470	0.012	0.504	0.481	0.023	13.003	$An_{50.0}Ab_{47.7}Or_{2.3}$
	5	54.825	28.012	0.289	10.747	5.499	0.371	99.741	2.485	1.496	0.011	0.522	0.483	0.021	13.019	$An_{50.8}Ab_{47.1}Or_{2.1}$
	6	56.319	27.399	0.340	9.831	5.726	0.457	100.072	2.535	1.453	0.013	0.474	0.500	0.026	13.001	$An_{47.4}Ab_{50.0}Or_{2.6}$
R2923	1	54.958	27.991	0.045	10.785	5.060	0.467	99.305	2.495	1.498	0.002	0.525	0.445	0.027	12.992	$An_{52.6}Ab_{44.7}Or_{2.7}$
	2	54.240	28.240	0.030	11.220	5.263	0.427	99.419	2.468	1.514	0.001	0.547	0.464	0.025	13.019	$An_{52.8}Ab_{44.8}Or_{2.4}$
	3	54.007	28.089	0.149	10.883	5.320	0.459	98.907	2.470	1.514	0.006	0.533	0.472	0.027	13.022	$An_{51.7}Ab_{45.7}Or_{2.6}$
	4	53.567	28.201	0.095	11.130	5.187	0.440	98.619	2.459	1.526	0.004	0.547	0.462	0.026	13.022	$An_{52.9}Ab_{44.6}Or_{2.5}$

Table S2 Atomic positions and occupancies in the modulated structure of sample Dul-15-8B. Note that all the fractional coordinates are based on **c**~14Å unit cell, even though the number of independent atoms is the same as in albite cell (**c**~7 Å).

label	atom	Average Occ.	Max Occ.	Min Occ.	x	y	z	Uequiv
M1	Ca	0.133(4)	0.169	0.098	0.26624(11)	-0.01220(3)	0.08100(2)	0.0279(6)
	Na	0.476(6)	0.512	0.440				
M2	Ca	0.391(4)	0.458	0.324	0.27158(10)	0.03077(7)	0.04734(9)	0.0133(3)
T_1o	Si	0.4535	0.747	0.160	0.49373(4)	0.33644(2)	-0.10713(2)	0.00648(10)
	Al	0.5465	0.840	0.253				
T_1m	Si	0.6736	0.938	0.409	0.50308(4)	0.31684(2)	0.11573(2)	0.00679(10)
	Al	0.3264	0.591	0.062				
T_2o	Si	0.6943	0.910	0.478	0.68514(4)	0.10875(2)	0.15822(2)	0.00670(10)
	Al	0.3057	0.522	0.090				
T_2m	Si	0.6546	0.923	0.387	0.18087(4)	0.37894(2)	0.17851(2)	0.00648(10)
	Al	0.3453	0.613	0.077				
O_A1	O	1			0.49740(12)	0.37132(6)	0.01064(6)	0.0159(3)
O_A2	O	1			0.57989(10)	-0.00812(6)	0.13893(6)	0.0100(2)
O_Bo	O	1			0.81246(11)	0.10394(6)	0.09430(7)	0.0145(3)
O_Bm	O	1			0.31592(11)	0.35283(7)	0.12232(8)	0.0202(3)
O_Co	O	1			0.48665(11)	0.20938(6)	-0.14032(6)	0.0134(3)
O_Cm	O	1			0.51387(11)	0.18786(6)	0.10649(6)	0.0147(3)
O_Do	O	1			0.30173(10)	0.39288(6)	0.30853(6)	0.0133(3)
O_Dm	O	1			0.69005(11)	0.36635(6)	0.21589(6)	0.0163(3)

Table S3 Atomic positions and occupancies in the modulated structure of sample SK90-12.

label	atom	Average Occ.	Max Occ.	Min Occ.	x	y	z	Uequiv
M1	Ca	0.129(9)	0.193	0.075	0.26697(15)	-0.0124(5)	0.0805(4)	0.0285(7)
	Na	0.499(12)	0.596	0.392				
M2	Ca	0.371(8)	0.532	0.250	0.27103(14)	0.02970(9)	0.04829(10)	0.0172(4)
T_1o	Si	0.4397	0.830	0.113	0.49383(3)	0.33618(2)	-0.10698(2)	0.00771(9)
	Al	0.5603	0.887	0.170				
T_1m	Si	0.6830	0.960	0.312	0.50302(3)	0.31716(2)	0.11584(2)	0.00788(9)
	Al	0.3170	0.688	0.040				
T_2o	Si	0.7149	0.931	0.425	0.68524(3)	0.10878(2)	0.15808(2)	0.00771(9)
	Al	0.2851	0.575	0.069				
T_2m	Si	0.6624	0.930	0.277	0.18094(3)	0.37915(2)	0.17853(2)	0.00748(9)
	Al	0.3376	0.723	0.070				
Oa1	O	1			0.49757(10)	0.37118(5)	0.01086(5)	0.0162(3)
Oa2	O	1			0.58017(8)	-0.00767(5)	0.13884(5)	0.0108(2)
Obo	O	1			0.81202(9)	0.10437(5)	0.09420(6)	0.0149(2)
Obm	O	1			0.31604(10)	0.35282(6)	0.12256(6)	0.0200(3)
Oco	O	1			0.48687(9)	0.20888(6)	-0.14006(5)	0.0144(2)
Ocm	O	1			0.51435(9)	0.18827(6)	0.10685(5)	0.0159(2)
Odo	O	1			0.30143(9)	0.39273(5)	0.30837(5)	0.0141(2)
Odm	O	1			0.69009(9)	0.36673(5)	0.21612(6)	0.0167(2)

Table S4 Atomic positions and occupancies in the modulated structure of sample R2923.

label	atom	Average Occ.	Max Occ.	Min Occ.	x	y	z	Uequiv
M1	Ca	0.198(2)	0.328	0.082	0.26671(12)	-0.01216(11)	0.0793(1)	0.0262(3)
	Na	0.475(3)	0.661	0.268				
M2	Ca	0.327(2)	0.648	0.038	0.27150(15)	0.02887(9)	0.04780(9)	0.0070(2)
T_1o	Si	0.3944	0.898	0.021	0.49380(4)	0.33570(2)	-0.10684(2)	0.00612(11)
	Al	0.6056	0.979	0.102				
T_1m	Si	0.7054	0.994	0.213	0.50308(4)	0.31773(2)	0.11605(2)	0.00615(11)
	Al	0.2946	0.787	0.006				
T_2o	Si	0.7110	0.954	0.334	0.68532(4)	0.10907(2)	0.15793(2)	0.00623(11)
	Al	0.2890	0.666	0.046				
T_2m	Si	0.6642	0.944	0.160	0.18113(4)	0.37949(2)	0.17857(2)	0.00613(11)
	Al	0.3358	0.840	0.056				
O_A1	O	1			0.49758(11)	0.37165(6)	0.01151(6)	0.0144(3)
O_A2	O	1			0.58062(10)	-0.00707(6)	0.13887(6)	0.0093(3)
O_Bo	O	1			0.81204(10)	0.10515(6)	0.09418(6)	0.0129(3)
O_Bm	O	1			0.31687(11)	0.35298(7)	0.12314(7)	0.0178(3)
O_Co	O	1			0.48715(10)	0.20792(6)	-0.13958(6)	0.0121(3)
O_Cm	O	1			0.51520(10)	0.18926(6)	0.10756(6)	0.0133(3)
O_Do	O	1			0.30097(10)	0.39289(6)	0.30826(6)	0.0122(3)
O_Dm	O	1			0.68937(11)	0.36694(6)	0.21607(6)	0.0151(3)

Figure S1

An image generated by overlaying all the main reflections by the APEX II software (looking down **c*** in reciprocal space), to show the number and positions of the satellite reflections. Each white dot represents a reflection recognized by the program, intensity information is not included in the figure. The *a*-reflections, *e*-reflections, *f*-reflections and third order satellites are labeled.